

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method for determining one or more logical interconnections among a plurality of network devices that are interconnected in a network in an indefinite relationship, wherein a power state is associated with a first network device, the method comprising the computer-implemented steps of:

changing the power state of the first network device from either (a) an unpowered state to a powered state or (b) from the powered state to the unpowered state;

identifying whether an alteration occurs at a second network device in response to changing the power state of the first network device; and

when the alteration occurs at the second network device, creating and storing first information representing a logical connection of the first network device to the second network device.
2. (Original) The method as recited in Claim 1, further comprising the steps of:

retrieving second information from a database, wherein the second information represents one or more logical connections of the first network device to the second network device;

comparing the second information from the database with the first information; and

generating an error if the second information indicates that a logical connection exists between the first and second network devices but the first information does not indicate that the logical connection exists between the first and second network devices.

3. (Original) The method as recited in Claim 1, wherein the second network device is a terminal server and wherein the step of identifying whether the alteration occurs at the terminal server further comprises:

determining whether a state of a port of the terminal server is changed from dead to

active in response to changing the power state of the first network device.
4. (Original) The method as recited in Claim 1, wherein the second network device is a switch and wherein the step of identifying whether the alteration occurs at the switch further comprises:

determining whether a trap on a port of the switch is raised in response to changing the

power state of the first network device.
5. (Original) The method as recited in Claim 1, further comprising:

receiving, in response to changing the power state of the first network device, additional

information from the first network device; and

recording the additional information.
6. (Previously Presented) A method for determining one or more logical interconnections among a set of specified network devices that are interconnected in a network in an indefinite relationship, the method comprising the steps of:

(1) establishing connections among a plurality of network devices based upon a set of

rules;

- (2) activating a particular network device of said set of specified network devices by supplying power to the particular network device that previously was not supplied with power;
 - (3) identifying whether, in response to activating the particular network device, a change occurs at one or more network devices of said plurality of network devices;
 - (4) when the change occurs at each of the one or more network devices, creating and storing information representing a logical connection of the particular network device to each of the one or more network devices; and
 - (5) repeating steps (2), (3), and (4) for each of said set of specified network devices.
7. (Original) The method as recited in Claim 6, wherein the set of rules are applied based upon one or more attributes of each connection.
8. (Previously Presented) The method as recited in Claim 7, wherein the one or more attributes of each connection include information that is selected from the group consisting of a type of connection between two or more network devices, the number of connections between a specific network device and one or more other network devices, and that a particular connection is between a first type of network device and a second type of network device.
- 9.-10. (Cancelled)
11. (Previously Presented) The method as recited in Claim 6, wherein the step of identifying whether the change occurs at one or more network devices further comprises:

determining whether a trap on a port of each of the one or more network devices is raised in response to activating the particular network device by supplying power to the particular network device that previously was not supplied with power.

12. (Previously Presented) A method for determining how devices are interconnected in a network, the method comprising the computer-implemented steps of:
sending a signal from a control device that results in a change in a power state of a first network device in response to the signal, wherein the power state changes from either powered to unpowered or from unpowered to powered;
determining whether the first network device is connected to a second network device by identifying an alteration at the second network device that occurs in response to changing the power state of the first network device; and
when the alteration occurs at the second network device, creating and storing information representing that the first network device is connected to the second network device.
13. (Previously Presented) The method as recited in Claim 12 wherein the first network device is connected to a power controller and wherein the signal from the control device is sent to the power controller that changes the power state of the first network device from unpowered to powered.

14. (Previously Presented) The method as recited in Claim 12, wherein the second network device is a terminal server and wherein identifying the alteration at the terminal server includes determining whether a state of a port of the terminal server is changed from dead to active in response to changing the power state of the first network device from unpowered to powered.
15. (Previously Presented) The method as recited in Claim 12, wherein the second network device is a switch and wherein identifying the alteration at the switch includes determining whether a trap on a port of the switch is raised in response to changing the power state of the first network device from unpowered to powered.
16. (Previously Presented) A method for determining how devices are interconnected in a network, the method comprising the computer-implemented steps of:
power cycling a first network device from either “off” to “on” or from “on” to “off”;
identifying whether a suspected link of the first network device and a second network device becomes active as a result of power cycling of the first network device;
and
when the suspected link become active, creating and storing information representing that the first network device is connected to the second network device.
- 17.-19. (Cancelled)

20. (currently amended) A computer-readable storage medium ~~carrying~~ storing one or more sequences of instructions for determining one or more logical interconnections among a plurality of network devices that are interconnected in a network in an indefinite relationship, wherein a power state is associated with a first network device, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:
- changing the power state of the first network device from either (a) an unpowered state to a powered state or (b) from the powered state to the unpowered state;
- identifying whether an alteration occurs at a second network device in response to changing the power state of the first network device; and
- when the alteration occurs at the second network device, creating and storing first information representing a logical connection of the first network device to the second network device.
21. (currently amended) The computer-readable storage medium as recited in Claim 20, further comprising instructions which, when executed by one or more processors, cause the one or more processors to carry out the steps of:
- retrieving second information from a database, wherein the second information represents one or more logical connections of the first network device to the second network device;
- comparing the second information from the database with the first information; and

generating an error if the second information indicates that a logical connection exists between the first and second network devices but the first information does not indicate that the logical connection exists between the first and second network devices.

22. (Currently amended) The computer-readable storage medium as recited in Claim 20, wherein the second network device is a terminal server and wherein the step of identifying whether the alteration occurs at the terminal server further comprises instructions which, when executed by one or more processors, cause the one or more processors to carry out the step of:

determining whether a state of a port of the terminal server is changed from dead to active in response to changing the power state of the first network device.
23. (Currently amended) The computer-readable storage medium as recited in Claim 20, wherein the second network device is a switch and wherein the step of identifying whether the alteration occurs at the switch further comprises instructions which, when executed by one or more processors, cause the one or more processors to carry out the step of:

determining whether a trap on a port of the switch is raised in response to changing the power state of the first network device.
24. (Currently amended) The computer-readable storage medium as recited in Claim 20, further comprising instructions which, when executed by one or more processors, cause the one or more processors to carry out the steps of:

receiving, in response to changing the power state of the first network device, additional information from the first network device; and recording the additional information.

25. (Currently amended) The computer-readable storage medium as recited in Claim 20, wherein changing the power state of the first network device is in response to a signal from a third network device.
26. (Currently amended) The computer-readable storage medium as recited in Claim 25, wherein the first network device is connected to a power controller and wherein the signal from the third network device is sent to the power controller that changes the power state of the first network device.
27. (Currently amended) A computer-readable storage medium ~~carrying~~ storing one or more sequences of instructions for determining one or more logical interconnections among a set of specified network devices that are interconnected in a network in an indefinite relationship, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:
 - (1) establishing connections among a plurality of network devices based upon a set of rules;
 - (2) activating a particular network device of said set of specified network devices by supplying power to the particular network device that previously was not supplied with power;

- (3) identifying whether, in response to activating the particular network device, a change occurs at one or more network devices of said plurality of network devices;
- (4) when the change occurs at each of the one or more network devices, creating and storing information representing a logical connection of the particular network device to each of the one or more network devices; and
- (5) repeating steps (2), (3), and (4) for each of said set of specified network devices.

28. (Currently amended) A computer-readable storage medium ~~carrying~~ storing one or more sequences of instructions for determining how devices are interconnected in a network, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:
- sending a signal from a control device that results in a change in a power state of a first network device in response to the signal, wherein the power state changes from either powered to unpowered or from unpowered to powered;
 - determining whether the first network device is connected to a second network device by identifying an alteration at the second network device that occurs in response to changing the power state of the first network device; and
 - when the alteration occurs at the second network device, creating and storing information representing that the first network device is connected to the second network device.

29. (Currently amended) A computer-readable storage medium ~~carrying~~ storing one or more sequences of instructions for determining how devices are interconnected in a network, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:
- power cycling a first network device from either “off” to “on” or from “on” to “off”;
- identifying whether a suspected link of the first network device and a second network device becomes active as a result of power cycling of the first network device;
- and
- when the suspected link become active, creating and storing information representing that the first network device is connected to the second network device.
30. (Cancelled)
31. (Previously Presented) An apparatus for determining one or more logical interconnections among a plurality of network devices that are interconnected in a network in an indefinite relationship, wherein a power state is associated with a first network device, the apparatus comprising:
- a means for changing the power state of the first network device from either (a) an unpowered state to a powered state or (b) from the powered state to the unpowered state;
- a means for identifying whether an alteration occurs at a second network device in response to changing the power state of the first network device; and

a means for creating and storing first information representing a logical connection of the first network device to the second network device, when the alteration occurs at the second network device.

32. (Original) The apparatus as recited in Claim 31, further comprising:

a means for retrieving second information from a database, wherein the second information represents one or more logical connections of the first network device to the second network device;

a means for comparing the second information from the database with the first information; and

a means for generating an error if the second information indicates that a logical connection exists between the first and second network devices but the first information does not indicate that the logical connection exists between the first and second network devices.

33. (Original) The apparatus as recited in Claim 31, wherein the second network device is a terminal server and wherein the means for identifying whether the alteration occurs at the terminal server further comprises:

a means for determining whether a state of a port of the terminal server is changed from dead to active in response to changing the power state of the first network device.

34. (Original) The apparatus as recited in Claim 31, wherein the second network device is a switch and wherein the means for identifying whether the alteration occurs at the switch further comprises:
a means for determining whether a trap on a port of the switch is raised in response to changing the power state of the first network device.
35. (Original) The apparatus as recited in Claim 31, further comprising:
a means for receiving, in response to changing the power state of the first network device, additional information from the first network device; and
a means for recording the additional information.
36. (Original) The apparatus as recited in Claim 31, wherein changing the power state of the first network device is in response to a signal from a third network device.
37. (Original) The apparatus as recited in Claim 36, wherein the first network device is connected to a power controller and wherein the signal from the third network device is sent to the power controller that changes the power state of the first network device.
38. (Previously Presented) An apparatus for determining one or more logical interconnections among a set of specified network devices that are interconnected in a network in an indefinite relationship, the apparatus comprising:
(1) a means for establishing connections among a plurality of network devices based upon a set of rules;

- (2) a means for activating a particular network device of said set of specified network devices by supplying power to the particular network device that previously was not supplied with power;
- (3) a means for identifying whether, in response to activating the particular network device, a change occurs at one or more network devices of said plurality of network devices;
- (4) a means for creating and storing information representing a logical connection of the particular network device to each of the one or more network devices, when the change occurs at each of the one or more network devices; and
- (5) a means for repeating steps (2), (3), and (4) for each of said set of specified network devices.

39. (Previously Presented) An apparatus for determining how devices are interconnected in a network, the apparatus comprising:
- a means for sending a signal from a control device that results in a change in a power state of a first network device in response to the signal, wherein the power state changes from either powered to unpowered or from unpowered to powered;
 - a means for determining whether the first network device is connected to a second network device by identifying an alteration at the second network device that occurs in response to changing the power state of the first network device; and
 - a means for creating and storing information representing that the first network device is connected to the second network device, when the alteration occurs at the second network device.

40. (Previously Presented) An apparatus for determining how devices are interconnected in a network, the apparatus comprising:
- a means for power cycling a first network device from either “off” to “on” or from “on” to “off”;
- a means for identifying whether a suspected link of the first network device and a second network device becomes active as a result of power cycling of the first network device; and
- a means for creating and storing information representing that the first network device is connected to the second network device, when the suspected link become active.
41. (Cancelled)
42. (Currently amended) The computer-readable storage medium as recited in Claim 27, wherein the set of rules are applied based upon one or more attributes of each connection.
43. (Currently amended) The computer-readable storage medium as recited in Claim 42, wherein the one or more attributes of each connection include information that is selected from the group consisting of a type of connection between two or more network devices, the number of connections between a specific network device and one or more other network devices, and that a particular connection is between a first type of network device and a second type of network device.

44.-45. (Cancelled)

46. (Currently amended) The computer-readable storage medium as recited in Claim 27, wherein the instruction for identifying whether the change occurs at one or more network devices further comprises instructions which, when executed by one or more processors, cause the one or more processors to carry out the step of:
- determining whether a trap on a port of each of the one or more network devices is raised in response to activating the particular network device by supplying power to the particular network device that previously was not supplied with power.
47. (Currently amended) The computer-readable storage medium as recited in Claim 28 wherein the first network device is connected to a power controller and wherein the signal from the control device is sent to the power controller that changes the power state of the first network device from unpowered to powered.
48. (Currently amended) The computer-readable storage medium as recited in Claim 28, wherein the second network device is a terminal server and wherein identifying the alteration at the terminal server includes determining whether a state of a port of the terminal server is changed from dead to active in response to changing the power state of the first network device from unpowered to powered.

49. (Currently amended) The computer-readable storage medium as recited in Claim 28, wherein the second network device is a switch and wherein identifying the alteration at the switch includes determining whether a trap on a port of the switch is raised in response to changing the power state of the first network device from unpowered to powered.
50. (Previously Presented) The apparatus as recited in Claim 38, wherein the set of rules are applied based upon one or more attributes of each connection.
51. (Previously Presented) The apparatus as recited in Claim 50, wherein the one or more attributes of each connection include information that is selected from the group consisting of a type of connection between two or more network devices, the number of connections between a specific network device and one or more other network devices, and that a particular connection is between a first type of network device and a second type of network device.
- 52.-53. (Cancelled)
54. (Previously Presented) The apparatus as recited in Claim 38, wherein the means for identifying whether the change occurs at one or more network devices further comprises:

means for determining whether a trap on a port of each of the one or more network devices is raised in response to activating the particular network device by supplying power to the particular network device that previously was not supplied with power.

55. (Previously Presented) The apparatus as recited in Claim 39 wherein the first network device is connected to a power controller and wherein the signal from the control device is sent to the power controller that changes the power state of the first network device from unpowered to powered.
56. (Previously Presented) The apparatus as recited in Claim 39, wherein the second network device is a terminal server and wherein identifying the alteration at the terminal server includes determining whether a state of a port of the terminal server is changed from dead to active in response to changing the power state of the first network device from unpowered to powered.
57. (Previously Presented) The apparatus as recited in Claim 39, wherein the second network device is a switch and wherein identifying the alteration at the switch includes determining whether a trap on a port of the switch is raised in response to changing the power state of the first network device from unpowered to powered.
58. (Previously Presented) The method as recited in Claim 1, wherein changing the power state of the first network device is in response to a signal from a third network device.

59. (Previously Presented) The method as recited in Claim 58, wherein the first network device is connected to a power controller and wherein the signal from the third network device is sent to the power controller that changes the power state of the first network device.
60. (Previously Presented) The method as recited in Claim 1, wherein:
when the power state of the first network device is the unpowered state, the first network device is not able to receive one or more packets over the network; and
when the power state of the first network device is the powered state, the first network device is able to receive one or more packets over the network.
61. (currently amended) The computer-readable storage medium as recited in Claim 20, wherein:
when the power state of the first network device is the unpowered state, the first network device is not able to receive one or more packets over the network; and
when the power state of the first network device is the powered state, the first network device is able to receive one or more packets over the network.
62. (Previously Presented) The apparatus as recited in Claim 31, wherein:
when the power state of the first network device is the unpowered state, the first network device is not able to receive one or more packets over the network; and
when the power state of the first network device is the powered state, the first network device is able to receive one or more packets over the network.

63. (Previously Presented) The method as recited in Claim 6, wherein:
when the particular network device is not supplied with power, the particular network device is not able to receive one or more packets over the network; and
when the particular network device is supplied with power, the particular network device is able to receive one or more packets over the network.
64. (Currently amended) The computer-readable storage medium as recited in Claim 27, wherein:
when the particular network device is not supplied with power, the particular network device is not able to receive one or more packets over the network; and
when the particular network device is supplied with power, the particular network device is able to receive one or more packets over the network.
65. (Previously Presented) The apparatus as recited in Claim 38, wherein:
when the particular network device is not supplied with power, the particular network device is not able to receive one or more packets over the network; and
when the particular network device is supplied with power, the particular network device is able to receive one or more packets over the network.
66. (Previously Presented) The method as recited in Claim 12, wherein:
when the power state of the first network device is unpowered, the first network device is not able to receive one or more packets over the network; and

when the power state of the first network device is powered, the first network device is able to receive one or more packets over the network.

67. (Currently amended) The computer-readable storage medium as recited in Claim 28, wherein:

when the power state of the first network device is unpowered, the first network device is not able to receive one or more packets over the network; and
when the power state of the first network device is powered, the first network device is able to receive one or more packets over the network.

68. (Previously Presented) The apparatus as recited in Claim 39, wherein:

when the power state of the first network device is unpowered, the first network device is not able to receive one or more packets over the network; and
when the power state of the first network device is powered, the first network device is able to receive one or more packets over the network.